WASHINGTON DEPARTMENT OF ECOLOGY

Agricultural Burning Rule Advisory Committee Meeting

October 21, 2005 10:00 – 4:00

Washington Department of Transportation, Spokane Office

SUMMARY

In attendance

Cindy Thompson	American Lung Association	Staff	
Bob Gore	Department of Agriculture	Melissa McEachron	Ecology
Michael Ingham	Alfalfa Seed Growers	Lori Isenberg	facilitator
Michael Bush	WSU- Extension		
Jay Penner	Wheat Growers		
Dave Lauer	Clean Air Authorities (BCAA)		
Jeff Schibel	Irrigated Community		
Grant Pfeifer	Department of Ecology		
Tim Conner	Save Our Summers		
Bill Johnston	WSU- Crop & Soil Sciences		
Sverre Vedal MD	Environmental and Occupational Health		

Agreements made during meeting

- November meeting changed to the 10th.
- Unanimous consent for the objectives.
- Unanimous support for the concept of using the two report forms to document decision for additional burning under marginal meteorological conditions.
- Consensus support for how the first (yellow) form would be used (six in full or partial support; one with significant concerns; one opposed)
- Consensus support for use of the second (red) form (seven in full or partial support, one with significant concerns; one opposed)

Assignments

- Committee members are to review the 020 information (sent out in September) for discussion at the November 10 meeting.
- Ecology will research best dates for the January meeting.

Opening

Lori Isenberg welcomed the group, gave a brief overview of the purpose of the meeting, Attendees introduced themselves.

Continued discussions on Issue #5 - Report on action items from last meeting

Tim Conner, Michael Bush, and Grant Pfeiffer had each sent in their respective assignments from the last meeting (more data, problem and objectives, sample forms). Copies of the reports from Tim and Michael Bush are attached. Nothing was received from the growers. The reports were emailed to the committee members the day before the meeting. Hard copies were handed out at the meeting.

Lori asked Grant to start by reporting on his assignments. Grant started with the objectives for these processes, which are listed here. Following discussion, Tim and Michael both agreed the essence of what they had prepared was included in objectives. The group unanimously supported the objectives.

Objectives

- Incorporate into the rule -- language that establishes/captures the existing burn management program and preserves the flexibility and discretion inherent in the program – while allowing for continued improvement for efficiency and as science and technology improve.
- Within reasonable costs
- Transparent to public (all)
- Provides mechanism for feedback (convenient)
- Focused on environmental effect (PM2.5 levels)
- Not establish an air quality standard
- Not establish an emission standard
- Addresses competing goals of minimizing impacts and allowing necessary burning

Grant continued reporting on his assignment, which was to provide more data and two sample forms. After much discussion the group unanimously agreed with the overall concept of using the two forms.

Discussion on proposed language

The remainder of the meeting was spent in detailed discussion regarding how and when the forms would be used. While this was frustrating for some committee members—partly because of philosophical differences and partly because of the different levels of understanding and familiarity with the Ecology processes—the discussion did result in a new proposal which was accepted by consensus with one in opposition (because he felt the process does not follow legislative intent). The additions of an annual report, as well as other suggestions by the group regarding time frames (24 hour versus 2 hour) were incorporated into the revised proposal. The full proposal is attached; key elements on which consensus was reached are noted here:

> 173-430-DEF(2) Ecology and local air pollution control authorities making daily and/or specific fire burn calls in areas where PM2.5 concentrations are regularly monitored will follow the procedures in subsection XYZ below at the time of making the burn decision whenever either of the following smoke management index conditions exist:
>
> (1) The most recent daily average (24 hour) PM2.5 concentration was equal to or greater than 16 micrograms per cubic meter (the division between 'good' and 'moderate' classifications of the U.S. Environmental Protection Agency's Air Quality Index (AQI) for particulates).
>
> (2) The 2 hour rolling average PM2.5 concentration, during the most recent 24 to 30 hours was equal to or greater than the regional seasonal average PM2.5 concentration plus 15 micrograms per cubic meter.
>
> 173-430-DEF(XYZ)(1) In authorizing additional burning, a determination will be documented explaining that the decision to allow additional burning is not expected to result in a further significant deterioration of air quality. The determination will be entered on a standard form noting the date, time, the location of the additional burning, the size of the burn(s), and a brief explanation of the opinion as to why the additional burning is not expected to result in a further, significant reduction of air quality. The purpose of the determination and record-keeping requirements of this section is to enhance agency and public understanding of the effectiveness of the daily burn and metering decision-making process, and to improve its application over time. A notice of such determinations will be made by the agency (Ecology or local air authority) at the time of communicating the daily burn decision and the agency will periodically make past standard forms conveniently available to the public.

173-430-DEF(XYZ)(2) Following a determination described in subsection 173-430-DEF(XYZ)(1) and a deterioration of air quality (to levels equal to or greater than a 2 hour rolling average concentration of the regional seasonal average PM2.5 concentration plus 25 micrograms per cubic meter) in the specific area during the 20 hours following such determination: Ecology or the local air pollution control authority will evaluate the deterioration and document any findings and opinions regarding why the deterioration occurred. Ecology or the local air pollution control authority will make evaluations under this subsection conveniently available to the public.

173-430-DEF(XYZ)(3) On an annual basis, Ecology or the local air pollution control authority will produce an annual report summarizing determinations and evaluations pursuant to the smoke management index.

Wrap-up

The group discussed and agreed upon the November meetings topics (mainly the 020 discussion). There were no comments from the audience. Committee members made final comments; Lori reviewed the accomplishments of the meeting and the assignments for the next meeting. Meeting was adjourned at 4:00.

Revisions to the draft language that are meant to capture the outcome of the Oct. 21 meeting.----------

Pfeifer **DRAFT** 11/8/2005

---- **Language Ideas** ----------

173-430-ABC The Department of Ecology and local air pollution control authorities will make daily and/or specific fire burn calls (during times of anticipated burning) and use metering when necessary to minimize the potential for adverse air quality impacts. Metering is a technique of limiting emission from burning at specific times and places by taking into account potential emission rates, forecasted weather (dispersion), and current and projected air quality. The burn decision process will consider: the potential number of burns and their expected size(s) and duration(s); recent and current ambient concentrations of pollutants; other potential emissions sources; and, evaluations and judgments about how foreseeable meteorological conditions will affect concentrations of pollutants in the air sheds.

173-430-DEF(1) For the purposes of this section: The smoke management index is set of conditions that guide the production of certain reports as described in 173-430-XYZ(1) and evaluations as described in 173-430-XYZ(2). The smoke management index is not an air quality standard as defined in RCW.70.94.030(3) and further identified in RCW 70.94.331. The smoke management index is not an emission standard as defined in RCW.70.94.030(12) and further identified in RCW 70.94.331. The smoke management index is not an air pollution episode as denominated in RCW.70.94.710.

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(1) The most recent daily average (24 hour) PM2.5 concentration was equal to or greater than 16 micrograms per cubic meter (the division between ‘good’ and ‘moderate’

classifications of the U.S. Environmental Protection Agency's Air Quality Index (AQI) for particulates).

(2) The 2 hour rolling average PM2.5 concentration, during the most recent 24 to 30 hours was equal to or greater than the regional seasonal average PM2.5 concentration plus 15 micrograms per cubic meter.

173-430-DEF(XYZ)(1) In authorizing additional burning, a determination will be documented explaining that the decision to allow additional burning is not expected to result in a further significant deterioration of air quality. The determination will be entered on a standard form noting the date, time, the location of the additional burning, the size of the burn(s), and a brief explanation of the opinion as to why the additional burning is not expected to result in a further, significant reduction of air quality. The purpose of the determination and record-keeping requirements of this section is to enhance agency and public understanding of the effectiveness of the daily burn and metering decision-making process, and to improve its application over time. A notice of such determinations will be made by the agency (Ecology or local air authority) at the time of communicating the daily burn decision and the agency will periodically make past standard forms conveniently available to the public.

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173-430-DEF(XYZ)(3) On an annual basis, Ecology or the local air pollution control authority will produce an annual report summarizing determinations and evaluations pursuant to the smoke management index.

173-430-GHI Pursuant to RCW 70.94.473 and RCW 70.94.775, no burning shall be authorized when an air quality alert, warning, emergency or impaired air quality condition has been issued.

Assignment response from Tim Conner that was emailed and shared at the meeting

Problem Statement

The development in recent years of a viable network of fine particle (PM 2.5) air pollution monitors in eastern Washington has provided the Washington Department of Ecology and regional air pollution control authorities with an important management tool as they try to balance the rights of farmers to burn fields and the requirements of the Washington Clean Air Act to protect human health and safety.

Grower and citizens organizations involved in the rule-making process (mandated by the 11/09/01 settlement agreement between Ecology and the Save Our Summers citizen group) are generally supportive of the program that has evolved whereby regulators rely heavily on the real-time data from the monitoring network to make daily decisions on how much burning should be allowed.

The problem is that the decision-making process has not been formalized such that it can be readily audited (and managed) for consistency of performance and continuity. There are no benchmarks that define reasonable decisions points (i.e., when do PM 2.5 concentrations reach a point where special attention is warranted in making new burn decisions?) nor is there a formal process for investigating instances in which burn decisions have, or appear to have, unintended consequences.

One measure of the success of any regulatory program is whether it is reasonably transparent so that citizens, taxpayers, and those directly affected by government decisions can review them and evaluate these decisions against the purposes of the law and the rules governing their application. In this instance, while affected citizens generally support the field burning program as it has evolved, they do not yet have the means to readily monitor the program to ensure that it is being properly and consistently administered.

How it would work

The proposed rules would require two changes to the way the Agricultural Burning program is currently administered. (For the purposes of this explanation the reference to "Ecology" and "Ecology official" would also apply to a regional air pollution control authority and an authority official when the authority has taken responsibility for making the daily burn decisions.)

1) The first change is that it creates clear decision points in the smoke management process at which certain burn calls will be registered. The registration will be on a standard form on which the Ecology official will record (at a minimum) the location and size of the burn, the PM 2.5 monitoring station(s) best situated to record a change in air quality resulting from the burn, and the reason why the official believes the burn will not result in a further significant deterioration of air quality.

Under Ecology's 9/23/05 proposal the threshold events for such registrations are:
a) During the most recent 24 to 36 hours, the 24-hour rolling average of PM 2.5 readings at one of the applicable monitoring station(s) show a rise in PM 2.5 concentration that is at least double the seasonal 24 hour PM 2.5 average for that station.
b) During the most recent 24 to 26 hours, the two-hour rolling average of PM 2.5 concentrations at one of the applicable monitoring stations is triple the air shed seasonal 24-hour average.

{If, as has been proposed by other members of the committee, a simple numeric threshold is preferable to the doubling/tripling threshold, SOS proposes that the numeric increase above the average be 10 ug/m3 in (a) and 15 ug/m3 in (b). This would address the concern that airsheds with typically cleaner air are being held to a more stringent standard.}

2) The second change is the requirement of an Ecology report if, after a registered burn call, a "significant deterioration of air quality" occurs. A "significant deterioration of air quality" would be defined as a 10 ug/m3 increase in the levels of PM 2.5 concentrations (at one of the identified monitoring stations) during the 24 hour period after a registered burn call has been made. When a significant deterioration of air quality occurs after the registration of a burn call, Ecology will file a brief report giving a best professional opinion as to why the deterioration occurred. The form of the report will also allow (but not require) the entry of "lessons learned" from the episode.

Assignment response from Michael Bush that was emailed out and shared at the meeting

During our Committee Meeting of 6/22/05, our committee debated the merits of incorporating the decision process taken by the Department of Ecology and local air pollution control authorities to determine whether agricultural burning is to be allowed on a given day or not into WAC guidelines. This would allow for uniform application of air quality regulations throughout the state and between agency administrations over time. Authorities must consider complex and dynamic factors such as current local air quality, meteorological conditions, seasonal weather patterns, forecasted air movement, predicted emissions dissipation, local air pollution episodes as well as other contributing factors to air quality. The Committee agreed that the current decision process does appear to adequately protect public health, yet allow for controlled agricultural burning. Capturing this decision process in WAC language was considered important. Given the complexity and evolving nature of emission forecasting, attempts to capture this process in writing is challenging and the finished product will likely be quickly antiquated by emerging technology. Of primary concern to most of the committee was the establishment of a standard air quality value, or "trigger," that would supersede the current decision process that does seem to be working to the satisfaction of all parties. Nevertheless, I feel that there has to be some sort of performance indicator that allows regulator agencies to evaluate the effectiveness of this decision process and allows outside interest groups to observe and review progress made by air pollution control authorities.

I fully support the proposed language submitted to the Agricultural Burning Rule Advisory Committee by Tim Conner and modified by Grant Pfeifer at the 9/23/05 meeting. This proposal establishes a burn decision "trigger" that is based unacceptably high deviations from the average seasonal value for a local area. This flexible burn decision trigger will be based best air quality data available to local air pollution control authorities not on a nationwide or statewide air quality value that may eliminate agricultural burning in areas with geographically poor air quality. While this trigger may be used to initiate agricultural burn bans, more importantly, the trigger initiates a record-keeping event (red sheet). These events can then be used as a performance indicator for the local regulator agencies (i.e., during the month of September, Region A had fewer unacceptably high air quality triggers than in previous five years). These records will also document and highlight the decision-making process taken by local air pollution control authorities to burn or not to burn within a established time interval around those occasions when air quality become unacceptable. An equally important component of these events is the investigation or determination report (green sheet) to explain why the air quality value significantly deviated (exceeded) the normal seasonal value. Both reports can prove as valuable evaluation tools to the air pollution control authorities as well as an accountability measure for any interested outside parties.

Draft Statement by M. Bush on 9/27/05